

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau

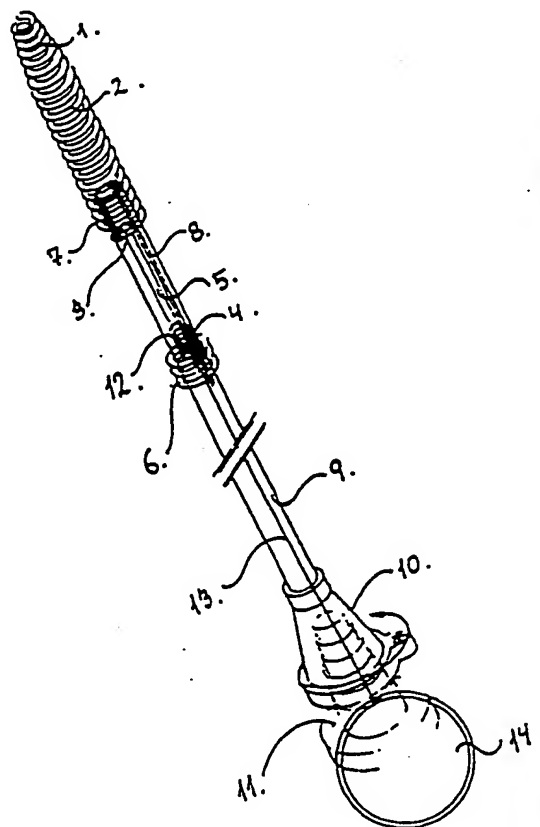
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>4</sup> :  A61M 25/00	A1	(11) International Publication Number: WO 89/01798 (43) International Publication Date: 9 March 1989 (09.03.89)
(21) International Application Number: PCT/DK88/00146 (22) International Filing Date: 2 September 1988 (02.09.88) (31) Priority Application Number: 4587/87 (32) Priority Date: 2 September 1987 (02.09.87) (33) Priority Country: DK (71) Applicant (for all designated States except US): ENGINEERS & DOCTORS A/S [DK/DK]; Købmagergade 55, DK-1150 København K (DK). (71)(72) Applicants and Inventors: JACOBSEN, Erik [DK/DK]; Holger Danskes Vej 19, 3.tv., DK-2000 Frederiksberg (DK). NIEBEN, Ole, Gyting [DK/DK]; Peblinge Dosserring 18, 3.tv., DK-2200 København N (DK). HARBOE, Henrik [DK/DK]; Tølløsevej 39, DK-2700 Brønshøj (DK).	(74) Common Representative: ENGINEERS & DOCTORS A/S; Købmagergade 55, DK-1150 København K (DK). (81) Designated States: AT, AT (European patent), AU, BB, BE (European patent), BG, BJ (OAPI patent), BR, CF (OAPI patent), CG (OAPI patent), CH, CH (Eu- ropean patent), CM (OAPI patent), DE, DE (Euro- pean patent), DK, FI, FR (European patent), GA (OAPI patent), GB, GB (European patent), HU, IT (European patent), JP, KP, KR, LK, LU, LU (Euro- pean patent), MC, MG, ML (OAPI patent), MR (OA- PI patent), MW, NL, NL (European patent), NO, RO, SD, SE, SE (European patent), SN (OAPI pa- tent), SU, TD (OAPI patent), TG (OAPI patent), US. Published With international search report. With amended claims. In English translation (filed in Danish).	

(54) Title: DEVICE FOR THE PLACING OF A PARTIAL CATHETER IN A BODY CAVITY

## (57) Abstract

Device consisting of an auxiliary catheter (9), a fastening element (13), and a blocking device (11), designed in such a way that a partial catheter (2) can be mounted and secured at the end of the auxiliary catheter until the partial catheter has been placed in the desired position in a body cavity, especially the urethra, after which the partial catheter can be detached from the auxiliary catheter by manipulation of the blocking device and the fastening element, so that only the partial catheter is left in the desired position in the body cavity.



-1-

DEVICE FOR THE PLACING OF A PARTIAL CATHETER IN A BODY CAVITY.

The invention concerns a device comprising an auxiliary catheter and a fastening element with a blocking device for the placing of a partial catheter in a body cavity.

- 5 The invention chiefly concerns an instrument for the placing of a partial catheter in the form of a spirally coiled metal wire in the urethra in men and especially in the part of the urethra that is located in the prostate. It will also be possible to apply the device according to  
10 the invention for the placing of partial catheters in other body cavities such as the oesophagus, the biliary passage, the intestine, or the trachea.

- Equipment for the placing of partial catheters in e.g. the  
15 biliary passage is known. A considerable disadvantage in the equipment already known is that it does not comprise an independent device for securing the partial catheter during the placing procedure. A further disadvantage in the equipment already known is that the equipment ends  
20 where the partial catheter begins, so that a very flexible partial catheter and particularly a spirally coiled metal wire catheter is very unstable during the process of placing.

- 25 The purpose of the present invention is to eliminate these disadvantages.

- 3 -

fastening element can be provided with one or more radiopaque markers.

5 In the following the invention will be described in greater detail with reference to the drawing, where

- 10 Fig. 1 shows a perspective picture of a preferred embodiment of a partial catheter.
- Fig. 2 shows a perspective picture of a preferred embodiment of the auxiliary catheter.
- 15 Fig. 3 shows a perspective picture of a preferred embodiment of a blocking device for the fastening element in relation to the auxiliary catheter and the partial catheter.
- 20 Fig. 4 shows a perspective picture of a preferred embodiment of the fastening element.
- 25 Fig. 5 shows a perspective picture of all the assembled parts of a preferred embodiment of the device in accordance with the invention.
- 30 In the drawing 1 indicates a tapered end coil of a spirally coiled metal wire catheter 2, preferably made of stainless, acid-resisting steel with a coating of gold. 3 and 4 indicate rods bent radially to the centre of the catheter and connected by a longitudinal, preferably 20 mm
- 35 long rod 5. The rods 3 and 4 are preferably shifted 180

- 5 -

cast around the lower end of the fastening element 13. After the mounting further rotation of the fastening element 13 is prevented by the funnel 11 being pressed partly into the interior of the conical part 10 of the auxiliary catheter 9, so that the disc-shaped handle 14 is  
5 blocked. The blocking is further secured by the fact that after the mounting much more than five mm of the funnel 11 protrudes from the conical part 10 of the auxiliary catheter 9, so that rotation of the handle is blocked.

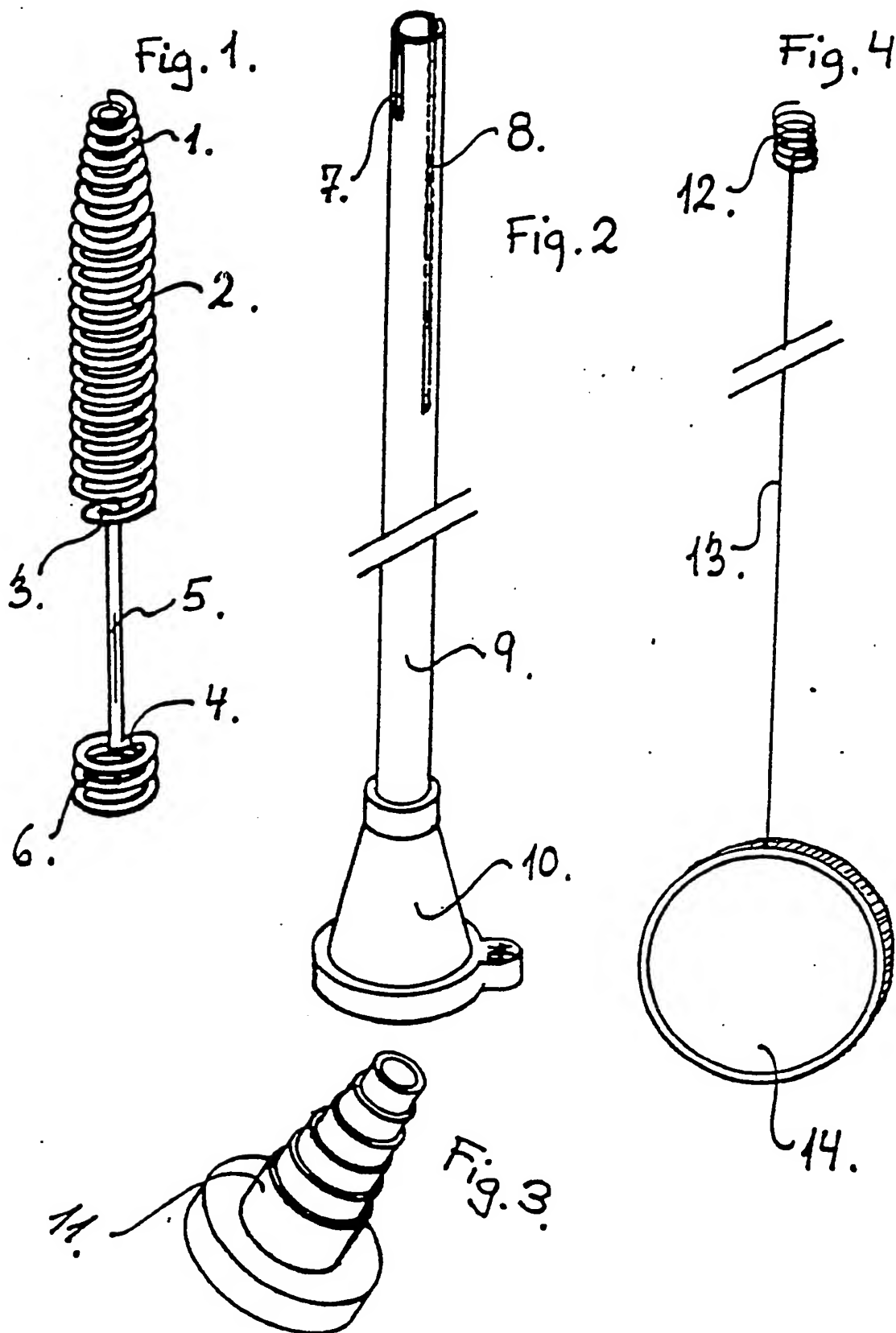
- 7 -

6. Device according to claim 4, c h a r a c t e r i z e d in that the wire is made of stainless steel.

5 7. Device according to claim 1, c h a r a c t e r i z e d in that the auxiliary catheter is made of a soft and flexible material.

10 8. Device according to claim 1, c h a r a c t e r i z e d in that the blocking device consists of an externally conical element and a funnel with the same taper, so that the cone can be pressed into the funnel and thereby secure a wire between the two parts, and where the wire is provided with a fixed plate, which prevents rotation of the wire as it is blocked by the part of the cone that  
15 protrudes from the funnel when the cone and the funnel have been pressed together.

20 9. Device according to claims 1, 3, 4, 5 and 8, c h a r - a c t e r i z e d in that a spirally coiled partial catheter with radially arranged rods and a central, longitudinal rod is connected with a spirally coiled part of the fastening element by means of a spiral movement, while at the same time an auxiliary catheter provided with longitudinal slots prevents rotary displacement of  
25 the partial catheter in relation to the auxiliary catheter as the radially arranged rods of the partial catheter are secured by the slots. At the same time, rotary displacement and axial displacement of the fastening element in relation to the auxiliary catheter are  
30 prevented by the blocking device according to claim 8.



# INTERNATIONAL SEARCH REPORT

International Application No PCT/DK88/00146

<b>I. CLASSIFICATION OF SUBJECT MATTER</b> (if several classification symbols apply, indicate all) *	
According to International Patent Classification (IPC) or to both National Classification and IPC 4	
A 61 M 25/00	
<b>II. FIELDS SEARCHED</b>	
Minimum Documentation Searched *	
Classification System	Classification Symbols
IPC 4	A 61 F 2/04, A 61 M 25/00
US C1	3:1, 128:348-350; 604:53, 104-109, 158-171; 604:263, 264; 623:12
Documentation Searched other than Minimum Documentation: to the extent that such Documents are included in the Fields Searched *	
SE, NO, DK, FI classes as above	
<b>III. DOCUMENTS CONSIDERED TO BE RELEVANT *</b>	
Category *	Citation of Document, ** with indication, where appropriate, of the relevant passages **   Relevant to Claim No: **
<p>* Special categories of cited documents: **</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"A" document member of the same patent family</p>	
<b>IV. CERTIFICATION</b>	
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report
1988-12-06.	1988 -12- 0 5
International Searching Authority	Signature of Authorized Officer
Swedish Patent Office	Leif Vingård 